Solex Gas Processing Corp.

Application to Amend a Gas Processing Scheme and for Natural Gas Pipelines

January 27, 2004

Alberta Energy and Utilities Board

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ALBERTA ENERGY AND UTILITIES BOARD

Calgary Alberta

SOLEX GAS PROCESSING CORP.
APPLICATION TO AMEND A GAS PROCESSING SCHEME AND FOR NATURAL GAS PIPELINES
HARMATTAN-ELKTON FIELD

Decision 2004-006
Application No. 1283973

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby denies Application No. 1283973.

2 INTRODUCTION

2.1 Application

Solex Gas Processing Corp. (Solex) applied to the EUB in accordance with Section 39 of the *Oil and Gas Conservation Act* for an approval to amend its processing scheme at its Harmattan-Elkton gas plant (Harmattan plant), under Facility Licence No. F4285. Solex intended to reprocess natural gas from Nova Gas Transmission Ltd.'s (NGTL) Western Alberta System (WAS). It proposed to remove up to 12 690 thousand cubic metres per day (10^3 m^3/d) of sweet natural gas from the NGTL system, to process it by removing the natural gas liquids (NGL) at the plant, and then to return the processed gas back to the NGTL system. This process is referred to as sidestreaming.

The Harmattan plant is located at Legal Subdivision (LSD) 9, Section 27, Township 31, Range 4, West of the 5th Meridian, about 27 kilometres (km) west of Didsbury and 15 km north of Cremona. It has a raw gas inlet processing capacity of 13 900 10^3 m^3/d of gas. The total approved sulphur inlet to the plant is at 82.7 metric tonnes per day (t/d) of sulphur. Sulphur emissions at the plant are up to 1.1 t/d at the maximum inlet raw gas capacity, based on an approved sulphur recovery efficiency of 98.6 per cent on a quarterly calendar-reporting basis. The plant's capacity and sulphur emission limits would remain unchanged.

Solex originally proposed to install two new 1660 kilowatt (kW) compressors at Harmattan. After reviewing the plant operations, Solex determined that two existing 1492 kW compressors were surplus and would therefore be suitable for the proposed natural gas extraction from and reinjection into the NGTL system. Subsequently, Solex amended its application to remove the need for the additional compressors. As a result, Solex was no longer proposing any major physical changes to the plant but was still applying for an amendment to its EUB approval to reprocess gas from the NGTL system.

Solex also applied to the EUB in accordance with Part 4 of the *Pipeline Act*, RSA 2000, c. P-15, for approval to construct and operate two natural gas pipelines, each with a maximum outside diameter of 610 millimetres, to be installed in a common right-of-way 8.7 km long between NGTL's WAS at LSD 1-23-31-5W5M and the plant (also part of the application). The pipelines would allow Solex to take delivery of gas off the NGTL system and to return the processed gas to the NGTL system after the extraction of a large percentage of the NGL.

2.2 Intervention

Burlington Resources Canada Partnership (Burlington), Imperial Oil Resources (Imperial), and ExxonMobil Canada Energy (ExxonMobil) intervened in support of the application. Each of these parties is a significant gas shipper and producer in Alberta and either is a working interest participant in the plant and/or produces natural gas currently processed at the plant. These interveners supported the Solex proposal as a competitive alternative to the processing and extraction of proprietary NGL.

Williams Energy (Canada), Inc. (Williams), BP Canada Energy Company and BP Canada Energy Resources Company (BP), and EnCana Corporation (EnCana) intervened in opposition to the application.

Williams owns and operates the Cochrane straddle plant (Cochrane plant) located in LSD 16-16-26-4W5M, downstream of Harmattan. The Cochrane plant currently receives, processes, and extracts NGL from the same NGTL system from which Solex intended to remove NGL. Williams submitted that the Solex proposal would have a direct impact on the Cochrane plant and that Solex did not provide evidence to support its application. Williams submitted that the Solex proposal would

- impact existing commercial practices and create an uneven playing field,
- contradict previous EUB decisions and policies,
- be inconsistent with the overall public interest and resource conservation, and
- threaten the viability of Alberta's existing straddle plant industry.

Williams filed expert reports and evidence on behalf of the Alberta Industry Group comprising BP, EnCana, Nova Chemicals Corp. (Nova Chemicals), ATCO Midstream, ConocoPhillips Canada, and itself. At the hearing, Williams assumed responsibility for this evidence.

BP submitted that it was a gas shipper and a significant gas producer in Alberta. It owned and operated a number of facilities in Alberta, including raw gas processing plants, straddle plants, and olefin plants. It submitted that it was mainly interested in issues that might jeopardize the long-term viability of the straddle plant system and the current contracting conventions for NGL extraction.

EnCana stated that as the largest producer of natural gas in Alberta, the largest shipper on the NGTL system, and the owner of significant straddle plant capacity at Empress on the eastern Alberta border, it had a number of interests in Alberta that could be directly and adversely affected by the application. Similar to BP and Williams, EnCana submitted that the Solex proposal was not in the public interest.

Nova Chemicals did not advocate a denial or approval of the application but rather took the position that there was no evidence that the Alberta petrochemical industry suffered from a scarcity of ethane suppliers. Given the limited scope of incremental ethane supply from the proposed project, it believed that the addition of more ethane marketers should be given little weight. Nova Chemicals submitted that Solex's contention on favourable ethane price impacts had not been demonstrated. It was concerned about the potential impacts of the project on the Cochrane plant and noted that these could offset any incremental ethane recovery from Harmattan.

ATCO Midstream did not advocate a denial or approval of the Solex application but rather requested that the Board clarify the rules for NGL extraction practices, having regard to the rights of parties to the common gas stream, as well as appropriate identification of and consultation with those affected.

Mr. Macklin, a member of the Foothills Natural Gas Co-op, was opposed to the application and raised a number of issues from a consumer's perspective. He was concerned that the project might have an impact on rural gas consumers by increasing gas transportation costs resulting from a change in the energy content per unit gas volume in the NGTL system.

2.3 Hearing

Following receipt of Solex's original application, the Board received letters from various parties who questioned the completeness of the application. In response, the Board issued a filing schedule to allow for information requests (IRs) between the applicant and interveners. The IR process occurred between July 4, 2003, and October 14, 2003.

The Board scheduled a public hearing to be held in Calgary, Alberta, commencing on October 28, 2003, before Board Member J. R. Nichol, P.Eng. (Presiding Member) and Acting Board Members F. Rahnama, Ph.D., and R. G. Evans, P.Eng. The hearing concluded on November 7, 2003. Those who appeared at the hearing are set out in Appendix 1.

3 BACKGROUND

3.1 Purpose of Proposed Project

The Harmattan plant was first constructed in 1961 to process gas produced from the Harmattan-Elkton and Harmattan East oil and gas units. The facilities were upgraded and expanded a number of times. The most recent additions, in 1997 and 1998, included a new sulphur conversion process to increase the sulphur recovery to meet current guidelines and a deep-cut turbo-expander and related facilities that could recover in excess of 80 per cent of the ethane, about 98 per cent of the propane, and essentially all of the butane and pentanes plus.

Solex submitted that processing raw gas was the best economic use of the plant's capabilities. However, Solex recognized that raw gas production had been on a steady decline over the past 10 years, notwithstanding that other pools had been tied into the plant. It stated that the historical annual average decline rate was about 17 per cent. Solex also stated that the current raw gas inlet volume was less than 20 per cent of approved inlet capacity. Solex stated that it had pursued and would continue to pursue the consolidation and tie-in of a number of smaller gas processing plants in the area to reduce its per-unit operating costs and hence attract new raw gas volumes.

Solex proposed to contract for NGL extraction rights with producers/shippers that held NGTL receipt capacity at receipt points located on the actual physical flow path upstream of Harmattan. It stated that it would have an initial sidestreaming capacity of 6980 10^3 m^3/d. As raw gas utilization of the Harmattan facilities declined, capacity for sidestreaming could increase to the applied-for 12 690 10^3 m^3/d. Solex noted that commercial terms had been reached for the full 6980 10^3 m^3/d of the initial expected sidestreaming capacity. Given that raw gas processing would continue to be a priority, Solex asserted that the contracts for sidestreaming were subject

to capacity reserved for raw gas either at present or in the future. However, these contracts were not part of the evidence submitted to the Board.

Solex noted that the ethane extracted at Harmattan could be delivered to the Alberta petrochemical market through existing available capacity on the Solex-operated pipeline that connects to the Alberta Ethane Gathering System. The extracted propane, butane, and condensate would be delivered into the local, provincial, and export markets by pipeline from the plant by truck or by rail from the Didsbury terminal.

Solex submitted that its proposed amendment to its gas processing scheme and the applied-for pipelines to and from the Schrader leg of the NGTL WAS were needed in order to

- provide a competitive processing alternative to the only current option, the Cochrane plant, for extracting NGL from gas transported on the NGTL WAS;
- reduce Harmattan unit operating costs, which in turn would encourage consolidation of the supply systems of other gas plants in the area, resulting in fewer emissions; in addition, lower unit operating cost would have the desirable effect of extending the economic life of the plant, leading to additional resource recovery from new and existing gas fields tied into Harmattan; and
- enhance ethane supply to Alberta's ethane-based petrochemical industry.

4 PRINCIPLES OF RESOURCE DEVELOPMENT, INCLUDING OWNERSHIP, EXTRACTION RIGHTS, AND BOARD PRECEDENT

4.1 Views of the Applicant

Solex submitted that there was no entitlement to the NGL unless they were extracted in the field. It maintained that by putting gas on the NGTL system, the producer lost its entitlement to the entrained NGL. Solex explained that by explicit agreement, receipt shippers and delivery shippers, including buyers through the NOVA Inventory Transfer (NIT),[1] agreed that NGTL would deliver gas of a quality that resulted from it having been transported and commingled with other gas of differing quality. NGTL's delivery obligation was limited to a volume of gas that had the energy content that the producer put on the system less volumes used by NGTL for fuel, lost by NGTL in the process, and other measurement variances. Solex noted that there might be no NGL in the volume of gas redelivered by NGTL to the producer or the shipper or to the purchaser/shipper of that producer/shipper gas on NGTL.

Solex submitted that when a producer put its gas on the NGTL system, it gave up ownership of the gas and its constituents in exchange for an entitlement to the energy value it represented. Solex added that the producer therefore abandoned its NGL in return for transportation services and an energy entitlement. In Solex's view, there was no entitlement for the receipt shipper or the delivery shipper to a proportionate share of the common stream. The abandoned NGL could then be scavenged by anyone on the system with extraction capacity. Solex submitted that under

[1] Title to the gas in the NGTL system is transferred, anonymously or not, through a mechanism called the NIT, which is a pool service concept providing for financial settlements among the parties. All shippers using NIT are bound by the terms and conditions of the NGTL tariff.

the current system, straddle plants scavenged the NGL and entered into contracts with delivery shippers because the scavenging had the potential to alter a delivery shipper's energy content.

Solex submitted that under the current NGTL tariff and operating practices, straddle plants had access to the common stream at points other than specified delivery points. By extension, Solex submitted that it should be able to have the same.

4.2 Views of the Interveners in Support of the Application

Burlington, Imperial, and ExxonMobil submitted that producers with receipt capacity on the NGTL system had a legal entitlement to the NGL entrained within the gas that they put on the system and the right to have their proportionate share of the gas delivered for extraction.

They submitted that the proprietary rights of an owner of natural gas and its constituents should not be subordinated to the commercial interests of any other participant in Alberta's natural gas industry. In their view, owners of natural gas and liquid constituents had unfettered rights to dispose of their property interests on commercial terms satisfactory to them. They opposed any measures that would be designed to limit the rights of an owner of gas being transported on NGTL as to how and to whom NGL liquid ownership or extraction rights might be granted.

They submitted that under common law a shipper in a common stream, such as the NGTL system, was entitled to a share of the common stream based on the quantity of a certain energy content injected into the system. They stated that this meant that a gas shipper got to take out of a commingled common stream the same energy (as measured in gigajoules) as it put into the system, pointing out that NGTL balanced shipper inventory on an energy basis, and so NGTL's practices were in accord with common law. They submitted that an NGTL shipper was entitled to its proportionate share of the common stream at the point that the gas was delivered and that it was therefore entitled to the associated NGL content of the gas at that point. They also argued that since receipt shippers remained liable under NGTL tariff for items such as gas lost due to line breaks, fuel, or unaccounted losses up to the border delivery point, it should follow that receipt shippers owned the gas up to that point.

They further submitted that nothing had changed in law or in respect of the NGTL tariff that would affect the correctness of the Board's conclusions on this point in EUB *Decision 96-7* (Strachan decision), as it related to the right of a receipt shipper to contract for the recovery of NGL from its share of the NGTL common stream. They submitted that the principles articulated by the Board in the Strachan decision had direct application to the present case and supported approval of the application.

4.3 Views of the Interveners Opposed to the Application

BP submitted that there was no provision in the NGTL tariff that would allow a receipt shipper to extract NGL from gas that it delivered to NGTL and then to transfer the residue gas to another party. In BP's view, the NGTL tariff provided that a delivery shipper was entitled to the average quality of the NGTL stream from the beginning of the day. As a result, BP submitted that the last party to obtain title to the gas prior to its severance from the common stream was the delivery shipper. It would therefore follow that the delivery shipper was deemed to have owned that gas from the beginning of the day, along with all rights of ownership, including the ability to direct extraction of NGL.

EnCana submitted that in the Strachan decision the Board found that joint ownership of the NGTL common stream, or tenancy in common, existed among shippers on the NGTL system. In its view, the fact that a tenancy in common was created when there had been a commingling of indistinguishable or fungible goods did not mean that an owner was precluded from reacquiring its property. EnCana submitted that this meant that any owner of a share of the common stream was entitled to take from the mix the equivalent of what it put into the mix. That owner acquired full dominion over the property once it was severed or partitioned from the common property.

EnCana reaffirmed the principle expressed in the Strachan decision that the resource should continue to be owned by the producer until the producer transferred ownership. However, EnCana submitted that on the NGTL system, transfers of ownership could occur every minute of every day through the NIT process. EnCana stated that a title transfer could be a direct transfer from a receipt shipper to delivery shipper(s) or to NIT-only customers, who in turn make title transfers to delivery shippers. In EnCana's view, the complexities associated with title transfers on the NGTL system made it impossible for straddle plants to enter into new extraction contracts every time an inventory transfer occurred. EnCana submitted that for this reason, the current convention was developed whereby straddle plants contracted with export delivery shippers to extract NGL.

Williams expressed views similar to those of BP and EnCana. It added that ownership would reside wherever the parties had contractually agreed that it would reside. Based on NGTL tariff, Williams submitted that transfer of ownership would occur upstream of the point of extraction. Williams added that the fact that receipt shippers retained commercial liability under the NGTL tariff for items such as gas lost due to leakage, fuel, or unaccounted losses up to the border delivery point did not necessarily mean that the legal title had not already transferred to the delivery shipper. Rather, this was an effect of the NGTL tariff independent from the notion of ownership.

ATCO submitted that when receipt shippers agreed to put their gas onto the NGTL system, they did not, as Solex suggested, abandon their gas and the entrained NGL but rather exchanged their ownership right to specific gas and NGL for a proportionate share of the common stream. ATCO stated that it followed that at any given time the common stream was owned collectively by all the shippers until such time as it was severed. ATCO emphasized that while the gas was contained within NGTL facilities, each and every shipper had an ownership right in every molecule. ATCO submitted that as a result, the entitlement of a producer (who is also a shipper) would be limited to its share of the average liquid content of the entire stream. Every shipper, in ATCO's view, irrespective of location would have an equal right to every molecule of gas anywhere on the system.

ATCO submitted that there was an obligation imposed on NGTL to fairly apportion the commingled stream. ATCO argued that fair apportionment must be based not only on energy content, but also on the underlying value of the entrained NGL. ATCO concluded that NGTL could not legally deliver to Solex gas out of the common stream that would be richer in NGL than the average liquid contents of the common stream.

4.4 Views of the Board

The Board continues to be of the view that, subject to any compelling public interest reason, the right of resource ownership should remain with the producer of that resource until the producer

relinquishes that ownership right. The Board believes that it should minimize regulatory intervention in commercial decisions, subject to the public interest.

These principles were established by a series of Board decisions on upstreaming at field extraction facilities between 1981 and 1986. Those decisions confirmed the right of producers to extract NGL at field extraction plants.

The Board, in EUB report *D88-D: Alberta Ethane Policy, Report on Implementation*, confirmed that producers could proceed with upstream ethane extraction subject only to regulatory approval by the Energy Resources Conservation Board (ERCB; now the EUB). This would still be subject to the condition that they may be required to reinject or provide ethane to the straddle plants, consistent with the Ethane Policy, if the straddle plant's ethane supply falls below a prescribed threshold level. As a result of this policy, the ERCB and later the EUB approved applications for new field extraction plants provided that conservation, social, and environmental requirements were met, that the plant was in the public interest, and that plant operation would not result in the threshold volume level being breached. If these criteria were met and there were no outstanding concerns by affected parties, the Board approved applications without a hearing.

The ability of producers to extract their NGL was taken a step further in the Strachan decision. There the Board acknowledged that joint ownership of the common stream existed among NGTL shippers, but maintained that individual owners should be afforded the right to reprocess their share of the stream at a point other than the straddle plants provided it did not afford that producer an exclusive privilege.

In the Strachan decision, Gulf (and some other producers having an ownership interest in the Strachan plant) was a producer of a relatively small volume of liquid rich gas upstream of a plant that was underutilized. The Board approved Gulf's application and confirmed that "subject to any matters of compelling public interest, the right of resource ownership should remain with the producer of that resource until the producer relinquishes that ownership through a commercial contract" (*Decision 96-7*, page 2). The Board found that the application met the public interest test because it involved a relatively small amount of gas and would have no identifiable impact on the viability of the straddle plant industry and because the Board expected that there would be little potential for more plants and producers to pursue that approach. In addition, to further ensure the protection of the public interest, the Board imposed four conditions:

- Reprocessing was limited to proprietary gas.
- Gulf had to demonstrate that it made a reasonable effort to maximize raw gas processing.
- In conjunction with other interested parties, Gulf was to develop at its own expense, maintain, and conform to a component-based monitoring system to ensure that plant owners recover no more NGL than they are entitled to.
- Gulf had to implement appropriate commercial arrangements to ensure that Gulf would not benefit from the same volume of gas processed at the Strachan gas plant and reinjected into the NGTL system being reprocessed by downstream straddle plants.

The Board concluded that Gulf should be entitled to sidestream gas for private reprocessing of the producer-owned entitlement of the common stream under the above conditions. The Strachan decision therefore extended the producer's right to extract NGL but recognized at the same time

the common stream implications and the need to ensure that a producer did not get more than its proportionate share of the NGL.

The Board reaffirms that a producer with a share of the common stream has the right to reprocess its proportionate share of the common stream, subject to the public interest.

The Board continues to acknowledge, as it did in the Strachan decision, that joint ownership with its associated issues exists in the NGTL common stream. The Board understands that under common law and under the NGTL tariff, this means that once a producer/receipt shipper puts its gas on the NGTL system it no longer owns that particular gas. The Board agrees with ATCO that at that point the producer/shipper gives up any and all rights to that specific gas and acquires, in exchange, a share of the common stream. A producer/shipper's entitlement from that point on is limited to a right to reacquire its share of the common stream once it is severed or partitioned from the common stream. On the NGTL system, the severance or partition occurs when gas is delivered by NGTL to a customer at a delivery point. Therefore, the Board understands that all shippers together own the entire stream while the gas is contained within the NGTL facility.

The Board concludes that once a producer/shipper enters into a transportation contract with NGTL, it gives up any and all rights to NGL in that specific gas in exchange for an appropriate share of the common stream.

The Board accepts that on the NGTL system, transfers of ownership may occur every minute of every day. There are, however, two points on the NGTL system when ownership can be easily established: at the receipt point when the receipt shipper puts gas on the system and at the delivery point when a delivery shipper takes gas out of the NGTL system. The Board understands that for this reason industry developed a convention to provide that straddle plants contract with shippers holding NGTL delivery capacity to a border delivery point for the extraction of NGL before the gas is exported out of the province. Given the complexities related to ownership of the gas on the NGTL system and the fact that a number of key players were absent at this proceeding, the Board is not prepared at this time to extend sidestreaming unless there are compelling public interest reasons to do so.

The Board notes that Solex's proposal goes further than the Strachan decision. Solex proposes to reprocess much larger volumes than approved at the Strachan plant, including a significant volume of third-party gas. Solex is proposing to extract ethane, whereas no ethane would have been extracted at the Strachan plant. Solex is not a producer of the gas it proposes to reprocess. However, the Board does not find that it is an essential condition that the producer own the plant to be able to reprocess its share of the common stream for NGL extraction. Rather, the Board finds that producers should be entitled to reprocess their share of the common stream, provided it would be in the public interest to do so.

The Board notes that apart from the differences in the applications themselves, the circumstances at the time of the Strachan decision were different from the present circumstances in at least two important aspects: First, the increase in unused capacity at field facilities provides facilities' owners with a motivation to seek sidestreaming in an effort to increase plant utilization, and second, the recent introduction of a new royalty structure for NGL entrained in the gas stream provides an incentive for producers to obtain benefit for the NGL for which they bear the Crown royalty liabilities.

The Board will therefore review the Solex application to determine its potential impacts on the public interest in light of the evidence submitted at this hearing, including the following:

- contracting convention and market impact — to determine the potential impact on current straddle plant NGL extraction contracting practices and on natural gas markets, including the NIT market;
- flow path and tracking methodology — to ensure that a producer does not get more than its fair share of the NGL through the development of an appropriate tracking methodology;
- assessment of incremental NGL — to assess the potential for additional NGL recovery, including an assessment from a provincial perspective of the benefits versus the associated costs, as well as to assess the potential increase in unit costs at affected straddle facilities;
- potential impact on existing straddle plants — to consider the impact on the viability of the straddle plant system as a result of this and possible future applications; and
- additional resource development — to assess the potential for additional resource recovery from new and existing gas fields and for plant consolidation as a result of potentially lower unit processing fees.

These public interest issues are addressed in the following sections of this report.

5 CONTRACTING CONVENTION AND MARKET IMPACT

5.1 Views of the Applicant

Solex submitted that the straddle plant convention for contracting for NGL extraction from gas streams destined for removal from Alberta was developed over many years. Under the convention, shippers with NGTL delivery capacity to a border delivery point downstream of the straddle plants were the only shippers eligible to contract for NGL extraction. Solex added that this was merely as a result of a convention accepted by industry and not as a result of legislation or regulation.

Solex noted that under the current convention, producers who did not hold delivery capacity downstream of straddle plants did not get any benefit from the NGL extraction. Currently, the majority (78 per cent) of the export capacity at the Alberta/British Columbia border was held by shippers that were not producers.

Solex proposed that, subject to certain eligibility conditions, shippers with either firm or interruptible receipt service on NGTL could deliver their gas for reprocessing at Harmattan on a contract-processing basis. Solex stated that there were no grounds to the interveners' argument that its proposed contracting mechanism would lead to a system-wide change for NGL extraction contracting practices from delivery shippers to receipt shippers. Solex submitted that at 3 per cent of total straddle plant capacity, Harmattan could not possibly influence or effect such a change. Any change to future straddle plants' contracting practices, in Solex's view, would be solely dependent on the Cochrane plant owners' competitive response to its application.

Solex submitted that consistent with the NGTL tariff, receipt shippers wishing to reprocess their gas at Harmattan would contract for sufficient Firm Transportation Extraction (FT-X) service for the energy shrinkage caused by the NGL removed at Harmattan, just as delivery shippers already

did under the current convention. Solex submitted that its application would not require a change to the NGTL tariff, nor would it affect the way in which NGTL or its shippers did business.

In response to the interveners' concern that Solex's proposed contracting practice would result in more than one party getting credit for NGL in the same volume of gas (referred to as "double dipping"), Solex responded that its proposal would, in fact, resolve the double dipping issue. Solex argued that double dipping could be eliminated entirely if the current convention were changed. It proposed that the contracting practice should recognize every receipt shipper's specific heat content and eliminate extraction eligibility for gas entering the NGTL system downstream of the straddle plants. Furthermore, Solex stated that the existing convention did not provide proper accountability between the delivery to NGTL of NGL entrained in gas and the extraction of NGL at straddle plants. Solex added that under the current convention, producers with border delivery capacity that either removed almost all NGL from their gas at field extraction facilities or had above-average NGL content in their gas received benefits based on the average NGL content of the gas at the straddle plant. Solex concluded that its receipt-point contracting and the combination of the Harmattan Flow Path and its proposed tracking methodology (described in Section 6 of this report) would go beyond the current convention in preventing double dipping. For this reason, Solex submitted that double dipping should not be an issue in considering its application.

Solex conceded that its application did not provide any mechanism to prevent NGTL shippers that would contract with Solex and also hold delivery capacity from being eligible for NGL extraction at downstream straddle plants. These shippers could potentially receive a double benefit, which is another form of double dipping. Solex's initial position was that no conditions should be imposed to prevent double dipping, but it confirmed at the hearing that it would accept a condition to prevent this particular circumstance. However, Solex submitted that a conditional NIT, as proposed by those opposing its application, to prevent the purchasers of the NIT volume of gas processed at Harmattan from entering into NGL extraction agreements with the straddle plants would not be workable or even acceptable.

Solex concluded that its plant location and operational characteristics provided the perfect opportunity for receipt-point contracting for NGL extraction, adding value to the producers that chose to process their proprietary gas at Harmattan. In Solex's view, its proposal represented an innovative development in the competition for NGL extraction from the NGTL gas stream. Solex added that its success in contracting with receipt shippers was a clear indication that the proposed competitive option appealed to the marketplace.

5.2 Views of the Interveners in Support of the Application

Burlington, Imperial, and ExxonMobil argued that the existing convention and business practices of the straddle plants were not mandated by law or by regulatory requirements, but rather were adopted as an administratively convenient and simple mechanism to obtain NGL. They added that the existing convention ignored the ownership rights of producers who delivered gas into the NGTL system using receipt service and arbitrarily conferred benefits on those delivery shippers that did not hold corresponding receipt capacity. They submitted that contrary to the straddle plant owners' assertion, there was no extraction premium within the NIT price. Therefore, the argument that a transfer of an extraction premium to receipt shippers would result in a downward effect on the NIT price to the detriment of all producers was simply unfounded.

Interveners in support of the application stated that the inequities caused by the existing straddle plant convention had provided an incentive for producers to contract with Solex. This incentive was further strengthened by the recent introduction of the new Crown royalty system, whereby producers now bore the liability of Crown royalties for the value of NGL extracted to the sole benefit of delivery shippers.

In response to the concern that approval of the application would lead to double dipping, they argued that given the current inequities associated with the existing straddle plant convention, any condition intended to prevent double dipping for Solex's contracted volumes should be avoided. Notwithstanding the fact that Solex indicated its willingness to accept a condition that would prevent a Harmattan shipper with NGTL delivery service from obtaining a second NGL extraction benefit at a downstream straddle plant, the interveners in support of the application opposed such a condition. They also opposed what was referred to as a conditional NIT.

They submitted that straddle plants should not be protected from competition and that approval of the application should not await any potential future process regarding straddle plant contracting practices. In their view, denial of the application or imposing onerous conditions would be tantamount to granting the straddle plants a franchise for NGL extraction.

5.3 Views of the Interveners Opposed to the Application

Williams, EnCana, BP, Nova Chemical, and ATCO Midstream submitted that the application represented a material departure from the current contracting convention. They stated that substantial investments had been made based on this convention and added that Solex did not consult with straddle plant owners or anyone else with respect to its proposed fundamental changes to the current business rules. In their view, a mixed system that would allow both receipt and delivery service contracting for NGL extraction would be inefficient and might ultimately lead to the breakdown of the NGL extraction industry.

Williams submitted that certain conventions and practices with respect to the NGL extraction business had evolved in recognition of the reality that NGTL was a commingled gas stream and not a point-to-point system. It stated that although some of the details of the existing practices and conventions had never been specifically incorporated into the terms and conditions of NGTL's tariff, they had formed part of the practical application. Williams provided the example of the Empress straddle plants that processed gas from a combination of NGTL pipelines: these plants had commercial arrangements to ensure that all of the straddle plants received an inlet gas stream of equivalent composition and that processed gas was returned to the NGTL system downstream of other straddle plant inlet connections. Williams added that the practice was premised on the notion that no one plant was to upstream another straddle plant, contrary to Solex's proposal that would essentially be upstreaming Williams's Cochrane plant facilities.

The interveners opposing the application referred to the Board's Strachan decision and the conditions under which approval was granted. They submitted that if the Board were to approve this application on an exception basis, as it did in the Strachan decision, the Board should attach conditions that would require Solex to limit its negative effects. This would include a condition to prevent double dipping in all forms. Williams went further and requested that the approval be conditional upon Solex contracting with delivery shippers until the implications of switching to receipt-point contracting had been investigated and impacts had been assessed. Furthermore, in keeping with current straddle plant practices, Williams stated that Solex should be required to

physically redeliver its residue gas downstream of the Williams Cochrane plant and be required to receive an inlet composition equivalent to that at the Cochrane plant.

Williams and others opposing the application submitted that if some NGTL receipt shippers were allowed to contract with Solex for NGL extraction, other NGTL receipt shippers would seek the same from the Empress and Cochrane plants. A shift to receipt-point contracting would require a component tracking system, which could potentially negatively affect the NIT gas market. The Board must then, in their view, consider the resulting impact on the NIT, natural gas markets, and gas prices, in addition to the impacts on the different parties and the commercial arrangements in place. In Williams's view, NGTL's Tolls, Tariffs, and Procedures Committee (TTP) would be an appropriate venue to examine some of the concerns raised, including operational procedures and component tracking.

Williams added that to compete with Solex, it would have to convert to receipt-point contracting. Williams stressed that by virtue of its location, the Cochrane plant would always be at a disadvantage, since Harmattan would always have access to the gas and NGL off the NGTL system first and it would redeliver lean residue gas upstream of the Cochrane plant, significantly impacting its economics.

BP stated that justifying a change in convention based on the fact that producers pay the royalty on the NGL component in the gas stream could not be supported, since producers were not necessarily the holders of receipt capacity on NGTL. BP submitted that there was no link between that royalty and the extraction rights. BP added that it believed that NGTL's FT-X service was available to delivery shippers only.

ATCO Midstream requested that the Board clarify the rules for NGL extraction having regard to the rights of parties to the common gas stream after identification of and consultation with those affected.

5.4 Views of the Board

The Board understands that the current convention for NGL extraction was adopted by the straddle plant industry in response to its commercial needs. The Board agrees that it provides an administratively convenient and relatively simple mechanism to obtain NGL supply from natural gas produced in Alberta prior to leaving the province. However, the Board was not presented with evidence of how and who participated in the development of this convention and whether the process was inclusive of affected parties. Similarly, no evidence was presented to indicate that attempts were made by producers to address a change to the current convention. In fact, other than the producers that are also straddle plants owners, none submitted evidence in this proceeding. The Board is concerned that parties to the hearing expressed that the current convention creates some inequities among shippers on the NGTL system. For example, some producers that are also receipt shippers never get the full benefit of their NGL if they do not hold export delivery capacity. In addition, shippers with delivery capacity at the export points stand to benefit from NGL extraction without having to put any gas on the system.

The Board notes that even those in support of the current convention agreed that it has its shortcomings. The majority of the parties, including Solex, expressed willingness to engage in future processes, whether industry or Board initiated, to examine the current contracting convention and determine what changes, if any, should be made to it. Solex, however, did not

believe that its proposal was sufficient to cause a system-wide change in contracting practices. The Board disagrees. The Board finds that the approval of the Solex application may affect the current straddle plant business practices for NGL extraction and may ultimately require changes to the current convention. In an effort to compete, Williams and other straddle plant owners may have to revert to receipt-point contracting. The Board believes that prior to formally considering any changes to the current convention, there ought to be a proper stakeholder consultation and assessment of the implications of any change on the viability of the straddle plant system, the proprietary rights of producers, and natural gas markets.

In addition, the Board shares the concern expressed by interveners opposing the application that a shift to receipt-point contracting may have an undesirable impact on the NIT market. In fact, even Solex agreed that a shift to receipt-point contracting could affect the NIT market and gas prices. However, the Board was not presented with evidence of the nature and extent of such impacts. In the Board's view, it is not only prudent but also necessary that any modification to the current contracting practices for NGL extraction be properly examined to ensure that it meets the needs of industry as a whole and that it is consistent with the broader public interest.

The Board agrees with Solex's contention that its application is consistent with the NGTL tariff. In the Board's view, the NGTL tariff per se does not and should not impede the movement of gas off the NGTL system for reprocessing of producers'/shippers' entitlement of the common stream. However, access to this service has to be achieved through measures that ensure efficiency and minimize adverse effects on other parties.

With respect to the issue of double dipping raised by the different parties, the Board does not consider that it needs to address it in the present case, given the circumstances. However, the Board notes that there is a disagreement between Solex and the parties it contracted with for reprocessing at Harmattan with respect to an imposition of a condition similar to that imposed in the Strachan decision. This condition, if it were to be imposed on Solex, would compel Solex to implement commercial arrangements to ensure that the same volume of gas reprocessed at the Harmattan plant and reinjected into the NGTL system could not be reprocessed by downstream straddle plants with a second commercial benefit to those with reprocessing arrangements at Harmattan. While Solex would not object to such a condition, the supporters of the application that entered into reprocessing arrangements with Solex submitted that they are not in agreement with Solex's position. This disagreement, in the Board's view, creates doubt as to whether the proposed project could be implemented and fails to address the fairness issue as raised in the Strachan decision. Ensuring that no more NGL is extracted than the producer is entitled to would have to be a condition of any approval.

The Board concludes that the approval of the Solex application would likely necessitate a change in the contracting practices and conventions respecting NGL and may in fact require the establishment of a system-wide NGL tracking methodology. Given the uncertainties with respect to the impacts of any change on the NGL extraction industry, the impacts on the gas markets in general, and the lack of industry-wide input into evaluation and development of alternatives to address this issue, the Board finds that a shift from the current convention would have to be evaluated in detail prior to implementing the Solex proposal and would have to be a condition of any approval.

However, should the Board decide to deny the Solex application, it is concerned about the inequities, as presented at this hearing, in the current convention and would expect that this

matter would be resolved through an industry process and the Board be advised by October 31, 2004. This industry process should be inclusive of affected parties, providing all constituents with a reasonable opportunity to advance their positions and concerns. The Board recognizes that there are a number of possible venues available to industry to initiate this review, but the Board believes that the preferred option is the collaborative process afforded to all NGTL shippers through the TTP committee. The Board requests that parties work with NGTL to initiate this review by April 1, 2004. If this issue has not been addressed through the TTP or otherwise, the Board may direct NGTL to consider this matter in its next tariff application.

6 FLOW PATH AND TRACKING METHODOLOGY

6.1 Views of the Applicant

Solex requested that the Board approve its proposed flow path and tracking methodology, which, in its view, was workable and fair in the context of its application. Solex defined the Harmattan flow path as the physical flow path upstream of Harmattan comprising the NGTL pipelines that receive, deliver, and transport gas to the tie-in point for Harmattan. Solex submitted that because the NGTL tariff already provided for extraction delivery and extraction receipt service, it could contract with producers at any receipt point on the NGTL system without the need for a tracking methodology. However, in proposing a tracking methodology, Solex hoped to provide comfort in that NGTL's service would be fairly accessed and would improve the equity and fairness of the current convention.

Solex submitted that its tracking mechanism would prevent extraction of NGL in excess of those put onto the system by shippers that contracted with Solex. It stated that its proposed tracking and contracting methodology would ensure that energy eligible for reprocessing at Harmattan would be limited to the contracted shipper's eligible receipts after adjusting for that shipper's intra-Alberta deliveries or storage on the Harmattan flow path. It explained that NGL extraction would then be limited to the lesser of the total net energy of each in-stream component delivered on the Harmattan flow path by Harmattan shippers or the NGL contained in the shipper's gas in the average NGTL stream eligible for reprocessing at Harmattan. Another limitation would be any split in physical flows on the NGTL system. Under such circumstances, the gas to be reprocessed at Harmattan would always be the lesser of the quantity contracted to Solex or the physical flow.

In response to the interveners' submission that no deduction would in fact be made for intra-Alberta deliveries, since receipt shippers are rarely holders of capacity for intra-Alberta deliveries, Solex stated that it could accept, as a condition of the approval, a pro rata reduction of all eligible gas on the Harmattan flow path for intra-Alberta deliveries, regardless of whether or not Harmattan shippers held the NGTL transportation contracts for those deliveries.

Solex explained that its proposed tracking methodology was based on the in-stream component information available for each individual receipt point for the purposes of Crown royalty. Solex added that if the methodology was accepted by government and industry as reasonable and practical for the purpose of Crown royalty, it should also be acceptable for the purpose of NGL allocation. Solex proposed to file a written annual report with the EUB summarizing, on an aggregate basis, all the components used in the determination of the contracted net eligible receipts for each month. The report would also summarize the in-stream components volumes of

ethane, propane, butane, and condensate in the net eligible receipts, along with comparisons with the respective actual extracted volumes. In addition, Solex stated that, as with all receipt and delivery points on NGTL, nominations would be placed and balanced on a daily basis at Harmattan and that Solex balancing methodology would be similar to the current system used by straddle plants.

Solex expressed the view that its proposed flow path and tracking methodology would adequately address the fairness issue raised by the Board in the Strachan decision and there was therefore no need for a system-wide tracking mechanism. Nevertheless, Solex indicated that it would agree to participate in broader discussions on a proper tracking methodology if industry were to move to system-wide receipt-point contracting. However, it submitted that approval of its application should not be conditional upon such a system being in place.

Finally, Solex submitted that its tracking methodology would not have any material impact on NGTL's administrative duties.

6.2 Views of the Interveners in Support of the Application

Interveners in support of the application argued that approval of the Solex proposal should not be deferred pending the establishment of a receipt-point tracking system. In their view, it would be tantamount to a denial, because without a sidestreaming approval, there would be no incentive for straddle plant owners to reach an agreement.

6.3 Views of the Interveners Opposed to the Application

Williams, EnCana, and BP all noted that under the current convention there was no need for component tracking. They submitted that Solex's tracking methodology was inconsistent with NGTL tariff because it was not based on the average liquid content of the common stream but rather on the assumption that receipt shippers on the flow path could claim entitlement to the specific quantities of NGL they injected in the NGTL system.

They added that if the Board were to approve the application, the approval should be conditional on Solex being responsible for developing, at its sole expense and in conjunction with all parties, a component-based monitoring and tracking system to track the receipt-shipper volumes throughout the NGTL system.

BP stated that the in-stream component system, while acceptable for royalty calculation purposes, would not be acceptable for NGL allocation. In response to Solex's suggestion that the in-stream component system was simply an averaging system not unlike the one used to allocate NGL at the straddle plants, BP and other interveners opposing the application submitted that the averaging occurring at the straddle plants came with the benefit of maintaining the NIT market. Interveners opposing the application believed that no benefits would accrue as a result of the proposed tracking methodology.

6.4 Views of the Board

The Board notes that Solex's proposed tracking methodology was not prepared in conjunction with other interested parties. No evidence was presented to show that Solex consulted with others for its design or its appropriateness.

The Board finds that the proposed tracking methodology, along with a possible shift to a new convention, raises issues associated with the upstream extraction of NGL from gas off the NGTL system that could have system-wide implications. The Board is therefore of the view that it would be inappropriate to comment on the adequacy of the tracking system proposed by Solex in the absence of a number of affected parties' (NGTL, receipt shippers, delivery shippers) comments and input. The Board believes that a tracking system, which would have system-wide implications, merits a much broader assessment and opportunity for direct input into its ultimate design. As mentioned earlier, the Board believes that the NGTL's TTP may be the venue for this review and expects that parties to this proceeding will work with NGTL to initiate a review process.

7 ASSESSMENT OF INCREMENTAL NGL

7.1 Views of the Applicant

Solex submitted that approval of its application could mean that 300 to 800 m^3/d (2000 to 5000 barrels per day) of incremental NGL, primarily ethane, would be produced in Alberta. It stated that all of the NGL recovered at Harmattan could be fractionated on site into specification ethane, propane, butane, and condensate products. Solex based its assessment of incremental NGL production on assessment of

- Harmattan's performance in terms of different inlet gas composition, expander conditions, and horsepower requirements for several different operating scenarios; and
- worst-case effects on the Cochrane plant expander trains, based on related information filed with the EUB and on the change in feed composition that would result from the sidestreaming project at Harmattan. This assessment included a review of a potential carbon dioxide freeze condition occurring at the Cochrane plant facilities. Solex concluded that if that were to occur, the situation could be managed with nominal facility or operational adjustments.

Solex also questioned the interveners' evaluations of potential impacts of the proposed sidestreaming and noted the following concerns:

- The model used by Williams to evaluate impacts on the Cochrane plant may not have been set up to adjust temperatures and pressures to converge at a new recovery level based on optimizing heat exchanger and compressor capacity use.
- Incremental reprocessing costs (recompression fuel) should not be included in assessments, as its project provided NGL extraction in the place of field facilities; thus the energy use that could be incurred in the field would be incurred at Harmattan.
- Williams had assumed Harmattan would process a blended NGTL WAS stream containing 5.91 per cent ethane in its evaluations of incremental NGL recoveries, whereas an additional 110 m^3/d (700 barrels per day) of incremental NGL recovery would result if Harmattan processed 7.06 per cent ethane content gas from the Schrader line. Solex submitted that it had chosen the Schrader line as the most efficient and economic option that would maximize liquid recovery and economic returns to producers and resource owners. It also noted that the Schrader line transported the producers' gas subject to reprocessing contracts with Solex.

7.2 Views of the Interveners Opposed to the Application

The interveners opposing the application questioned whether incremental NGL production would result from the proposed project and believed that costs related to reprocessing gas sidestreamed at Harmattan would be greater than the value of any incremental NGL production.

The Alberta Industry Group stated that based on 54 000 10^3 m^3/d of gas flowing past the Cochrane plant and on Solex sidestreaming 12 690 10^3 m^3/d of gas, it estimated that Solex's proposed sidestream project would result in 280 m^3/d of incremental ethane. It submitted that the incremental ethane amounted to 0.7 per cent of total Alberta production.

EnCana and BP questioned whether the incremental value of NGL arising from the proposed sidestreaming project would justify the additional energy to reprocess the same gas more than once. Williams submitted that the net effect of processing and compressing 12 690 10^3 m^3/d at Harmattan and then reprocessing the gas at the Cochrane plant would require 22 000 kW in incremental energy. The Alberta Industry Group estimated that present-value costs of the project, recompression, and related carbon dioxide emissions costs would exceed the value of incremental NGL by $54 million, or by $45 million if costs for carbon dioxide emissions were ignored.

BP maintained that additional costs imposed on others as a result of the Solex application could not be justified, even if there were additional ethane production. BP added that Solex's reasons for sidestreaming off the NGL richer Schrader line did not justify the inequities this imposed on the Cochrane plant and the shippers Williams contracted with. Both BP and Williams stated that if the project were to proceed, Solex should be required to return residue gas from the sidestreaming operation to the NGTL system downstream of the Cochrane plant. Failure to do that could lead to highly inefficient use of resources. Williams added that this would lead to repeated processing of gas without any benefits to offset the substantial costs incurred. BP argued under such a circumstance Solex should make commercial arrangements with Williams to cover the additional operating and capital costs that could be imposed as a result of the Harmattan sidestreaming project.

Nova Chemicals stated that there was no evidence that the Alberta petrochemical industry suffered from a scarcity of ethane suppliers. Given the limited scope of supply from the proposed project, it believed that the addition of more ethane marketers should be given little weight. Nova Chemicals submitted that Solex's contention of favourable ethane price impacts had not been demonstrated. It was concerned about the potential impacts of the project on the Cochrane plant and noted that these could offset any incremental ethane from Harmattan.

7.3 Views of the Board

The Board is of the view that the proposed project may result in a marginal increase in Alberta NGL supply provided that the Cochrane plant would be optimized for the leaner feed stream that would result from sidestreaming at Harmattan. The Board concludes that any net increase in NGL supply would be relatively small and less than 800 m^3/d, or about 2 per cent of total Alberta ethane production.

The Board notes that a major NGL purchaser, Nova Chemicals, expressed concern about the application on the basis that incremental production would be small and that the project would have a limited, possibly negative impact on NGL markets.

The Board notes that incremental production alone does not define whether the proposal is consistent with the broad public interest. The Board believes that it must also have regard for the benefits versus the costs of producing the incremental NGL from a province-wide perspective. In this particular case, the Board finds that it must consider the energy consumed to realize the incremental production as part of the total cost of the additional NGL. In this regard, the Board does not agree with Solex that there would be no net incremental energy use as a result of its proposal. The Board notes Solex's position that there would be no increased energy use based on its view that the alternative to its proposal would be less efficient field extraction. In the Board's view, there is no evidence that this would be the case. Unless the Harmattan residue gas is returned to the NGTL system downstream of the Cochrane plant, the Board believes that reprocessing energy costs must be included in assessing the potential benefit of Solex's proposal from a public interest perspective. On the basis of the evidence presented, the Board concludes that the proposal would have a net negative economic value from a provincial perspective.

8 POTENTIAL IMPACTS ON EXISTING STRADDLE PLANTS

8.1 Views of the Applicant

Solex stated that as Harmattan was presently operated, lean residual gas was shipped to NGTL's eastbound system. However, if the application were approved, this would no longer occur. Instead, a greater amount of lean residue gas would be pipelined to the southbound NGTL Schrader line. Solex submitted that its proposal would have no negative impact on the Empress straddle plants and, if anything, the impact at the Empress straddle plants would be positive. It conceded that there would be a negative impact on NGL production at the Cochrane plant, but noted that it would still be able to process gas with a greater NGL content than was the case at Empress. Solex stated that Harmattan could process up to one-third of the current 42 000 10^3 m^3/d (1.5 billion cubic feet per day [bcf/d]) being processed at the Cochrane plant and that gas processed at Harmattan would be reprocessed at the Cochrane plant. It contended that its proposal would reduce NGL volumes recovered at the Cochrane plant, while the operating costs would remain about the same.

Solex stated that the potential for upstreaming was a business risk that was assumed in the development decisions for the Cochrane plant. As a consequence, it maintained that the impact on the Cochrane plant of leaner gas streams containing less NGL was not a test that should be applied in assessing its proposal. It noted several past Board straddle plant decisions that advised proponents that they carried the risk that NGL extraction at upstream facilities could affect their plants. Solex submitted that there was no evidence that Williams would shut down the Cochrane plant if the Harmattan sidestreaming proposal were approved. It noted that while there would be a commercial impact on the Cochrane plant, Solex's proposal would not have an impact on any rights of Williams.

Solex expressed the view that its proposal would not result in a proliferation of upstream NGL extraction facilities. To identify plants that could be candidates for sidestreaming operations, Solex submitted that such plants would have to have characteristics that included

- reasonable distance to an NGTL mainline,
- NGTL gas composition satisfactory for NGL extraction,
- an existing turbo expander with significant excess capacity,

- high ethane and propane plus recovery efficiencies,
- existing NGL pipeline transportation facilities with excess capacity,
- existing fractionation facilities with significant excess existing capacity,
- proximity to natural gas liquids end-use markets,
- no joint plant ownership conflicts with downstream straddle plants, and
- rights to process gas in commercial quantities.

It submitted that it had reviewed the 33 potential sidestreaming plants identified by the interveners and concluded that only Harmattan met the criteria. Therefore, Solex concluded that approval of its proposal would not result in proliferation of sidestream NGL recovery facilities off the NGTL system.

8.2 Views of the Interveners Opposed to the Application

EnCana disputed the suggestion that because NGL could be extracted in the field, it would likewise be appropriate to allow NGL to be extracted off the NGTL system upstream of the straddle plants. It maintained that this would change the rules on which it made its investment decisions to construct its Empress straddle plant in the mid-1990s. EnCana indicated that it understood the risk that NGL could be extracted in the field but stated that there was never any mention of a risk that sidestreaming would be allowed.

BP argued that the Solex application threatened the long-term viability of the Alberta straddle plant system. It submitted that Harmattan could extract as much as 3800 m^3/d (24 000 barrels per day) of NGL, a volume 11 times greater than proposed by the owners of the Strachan plant. BP relied on the evidence of the Alberta Industry Group on potential proliferation of sidestreaming operations and stated that should the Board approve the Solex proposal, the Empress straddle plants could suffer a fate similar to the one faced by the Cochrane plant.

The Alberta Industry Group stated that approval of the Solex application could create an incentive for companies to extract NGL upstream as far as possible to get access to NGL at the lowest cost. This could lead to multiple sidestreaming operations that would add cost to the overall NGL supply system every time gas was processed and recompressed. In the report *Preliminary Assessment of Alberta Gas Plants with Capability to Reprocess NGTL Mainline Gas*, plant design, available capacity, and distance to NGTL mainlines were used as screening criteria to identify 33 possible candidates for sidestreaming out of 760 Alberta gas plants. The candidate plants were noted as having an available sidestreaming capacity of 160 000 10^3 m^3/d (5.8 bcf/d). The Alberta Industry Group noted that the evaluation was based on the capacity of raw gas plants and conceded that there would be a number of other factors that would need to be taken into account when considering sidestreaming.

Williams stated that if Solex were not required to deliver its residue gas downstream of the Cochrane plant, Alberta would be moving to a rule-of-capture that favoured upstream plants. It noted that upstream plants by virtue of location had first access to gas and downstream straddle plants must process gas that had already been stripped. As a result, downstream plants faced increased costs, as would the petrochemical industry. Williams submitted that it would be naive to assume that other plants that were significantly underutilized, essentially fully depreciated, experiencing declines in connected reserves, and facing the prospect of significant

decommissioning and reclamation costs would not respond to the economic incentive of sidestreaming. It stated that only a minimal response would be required to put the viability of the straddle plant industry in jeopardy.

Williams observed that it could respond to Solex's proposal by constructing facilities to deliver gas from the NGL-rich Schrader line to its Cochrane plant upstream of the Harmattan tie-in. It noted, however, that heading down that path would lead to a situation similar to that along the U.S. gulf coast, where uncontrolled development had led to a less competitive extraction infrastructure.

Williams stated that while the straddle plant industry accepted the risks associated with NGL recovery at field plants, the industry had not accepted the risks of being upstreamed by a mainline straddle plant. In its view, it would not be in the public interest to impose such unexpected risks on the straddle plant industry.

8.3 Views of the Board

The Board believes that a cost-effective, energy-efficient, and resource-value-enhancing provincial NGL recovery/supply system is in the public interest. The Board maintains that all producers should be provided with a fair opportunity to realize the value of their NGL. The Board also believes that subject to the ethane policy, the straddle plants do not have a pre-emptive right to be protected from upstream NGL recovery. However, the Board is concerned that the viability of the existing straddle plant system ought not to be jeopardized by proliferation of competitive sidestreaming projects on the NGTL system, unless there is a clear and compelling public interest reason for doing so.

The Board agrees with the interveners opposed to the application that the ability to extract significant NGL from the NGTL stream could be an incentive for plants with unused capacity other than Harmattan to pursue sidestreaming upstream of the straddle plants and upstream of each other. The Board acknowledges that there are a number of plants with unused processing capacity. The Board views that while the enhanced NGL production at any one plant may well be the basis for an economic project for the proponent, the overall effect on the Alberta NGL supply system could be significantly reduced energy efficiency, increased NGL supply costs, and lower overall NGL recoveries. Energy and cost inefficiencies, in particular, would result if residue gas from sidestream operations were returned to the NGTL system upstream of straddle plants that subsequently reprocess the leaner gas. Reduced NGL supply could result if sidestreaming of partial NGTL flows ultimately causes downstream straddle plants to shut down or bypass lean gas, both of which would result in increased volumes of NGL leaving the province.

As noted earlier, the Board is concerned that parties to the hearing stated that there are inequities in the existing system that need to be resolved in order to provide for fair producers' return on the NGL while at the same time preserving the viability of the existing straddle plant system. In this case, sidestreaming is not an optimal solution to such inequities. The Board must balance the producers' right to receive fair value for NGL with the broader public interest of optimum resource recovery and added value to the province. The Board concludes that approval of this application may encourage other sidestreaming projects, with a possible cumulative negative impact on the viability of the straddle plants.

9 ADDITIONAL RESOURCE DEVELOPMENT

9.1 Views of the Applicant

Solex submitted that it had the potential to generate significantly more income from raw gas processing than from processing sidestreamed gas. Since raw gas processing would use excess capacity in more functional units of Harmattan, Solex would always have a financial incentive to process raw gas, if available, over processing gas sourced from the NGTL system.

Solex noted that the about 60 per cent of Harmattan's operating costs were fixed regardless of gas throughput. It stated that additional sidestreamed gas volumes would result in the ability to spread the fixed costs over a larger volume of gas, resulting in lower per-unit operating costs for raw gas processing. Solex expressed the view that a lower per-unit operating cost was not the only objective of its proposal. However, it would be an outcome that could improve Solex's ability to provide competitive processing to third parties under fixed fee arrangements. While Solex conceded that its current processing arrangements were of varied terms, it stated that lower processing fees would be negotiated on a go-forward basis upon expiry of current agreements.

Solex submitted that reduced processing fees would result in increased profitability for producers that pay a share of actual per-unit operating costs on a flow-through basis and would improve Harmattan's ability to provide a viable consolidation alternative to operators of other area plants experiencing increasing unit operating costs.

Solex submitted an inlet volume forecast for Harmattan to the year 2013. The forecast was premised on a total gas processing capacity fixed at 10 450 10^3 m^3/d until 2007, at which time the capacity was projected to increase to 12 690 10^3 m^3/d, reflecting the redeployment of existing plant compression to sidestream service. Solex added that the forecast consisted of estimates of the inlet flows for each of the raw gas streams currently entering the plant. This forecast also included future development activity, future raw gas streams from area plants that could be economically rationalized into Harmattan, and expected sidestream volumes to use the full approved plant inlet capacity.

According to Solex, it determined the inlet volume forecast as a result of prospective plant consolidation based on its assessment of the likelihood of such consolidation. Solex identified candidates for consolidation that had a 50 per cent or greater probability of being realized as Tier I and those with less than 50 per cent probability as Tier II. The list of candidates did not include plants that process less than 560 10^3 m^3/d or with sulphur volumes that exceeded Harmattan's processing capacity. Solex projected that currently contracted sidestream gas would decline from its 2004 level of 6990 10^3 m^3/d to 5440 10^3 m^3/d by year 2006, when raw gas from both Tier I and Tier II could be processed at Harmattan, but then would increase to 9580 10^3 m^3/d by 2013. Meanwhile, raw gas processing from current sources would decline from 2540 10^3 m^3/d in 2006 to 1440 10^3 m^3/d by 2013. Solex stated that its analysis indicated that at end of the forecast period as a result of consolidation, there could be an additional amount of raw gas processed at Harmattan by up to 560 10^3 m^3/d (with a 50 per cent or greater probability of occurring) or up to 1100 10^3 m^3/d (with a less than 50 per cent probability).

Solex maintained that approval of its application would have a positive impact on resource conservation. It stated that a reduction in the Harmattan per-unit operating costs would extend the economic life of the plant, leading to additional resource recovery from existing and new gas

and oil fields served by Harmattan. Solex added that higher netbacks to the producers eligible to reprocess their gas at Harmattan would also result in increased resource conservation to the benefit of the province. Solex concluded that there would also be a positive overall public impact due to improved competitiveness of Harmattan and ability to consolidate supply systems of other gas plants in the area, which would result in fewer emissions and emission sources and less flaring.

Solex submitted that it would be prepared to be obligated to satisfy the EUB, on a regular basis, that it was making reasonable efforts to optimize the use of the Harmattan plant for raw gas processing. It noted that all current sidestream contracts specified that raw gas processing would have priority over sidestream processing. Solex committed that all future contracts would also include the same provision.

9.2 Views of the Interveners Opposed to the Application

The interveners opposing the application argued that Solex failed to substantiate its contention that reduced unit costs from sidestreaming would be passed on to producers. They pointed out that the application differed from the Strachan decision, where Gulf as both owner and producer had the expectation that increasing throughput would reduce its unit costs. These reductions would automatically be passed on to producers owning the reserves in the plant area. The interveners pointed out that if Harmattan were to be denied the sidestream option, it would be easier for producers to negotiate a processing fee for their raw gas processing. Furthermore, they added that if producers in the Harmattan service area truly believed that approval of the application would reduce their processing fees, they would have appeared in front of the Board in support of Solex.

BP argued that for ExxonMobil and Burlington, plant consolidation and resource conservation were not the motives behind their intervention in support of Solex's application. BP believed that as original owners of Harmattan, they might be motivated by the desire to avoid substantial environmental and reclamation liability associated with the closure of the Harmattan plant. BP submitted that approval of this application would effectively defer environmental and reclamation responsibility for at least as long as gas flowed on the western leg of the NGTL system.

9.3 Views of the Board

The Board strongly supports the concept of rationalization of existing gas plants. However, the Board understands that absent any environmental and social impacts or any other aspects of the broader public interest, plant consolidation is a business decision that facility owners must make having regard for their own particular circumstances and their own assessment of the commercial opportunities.

The Board accepts that it is in Solex's interest to continuously explore ways to improve its plant utilization, since raw gas processing would clearly offer the best economic returns. The Board agrees that, in fact, market forces will ensure that raw gas processing would continue to be of preference to sales gas processing. The Board notes Solex's commitment to satisfy the Board on an annual basis that it has made reasonable efforts to optimize the use of Harmattan for raw gas processing.

However, the Board finds that insufficient evidence was submitted to support the position that approval of this application would result in developing additional resources that otherwise could not have been developed.

10 CONCLUSION

The Board reaffirms that producers have the right to extract NGL in the field. The Board in this decision also reaffirms, as it did in the Strachan decision, that while joint ownership exists among shippers in the NGTL common stream, an individual producer should be able to reprocess its share of the common stream, provided that it is not an exclusive privilege and that the producer does not recover more than its appropriate share of the NGL content. While the Board does not believe that straddle plant owners have a pre-emptive right to the NGL in the common stream, the Board believes that maintaining the viability of the straddle plant industry as a whole continues to be in the public interest. The straddle plants were constructed to reprocess large volumes of marketable gas before leaving Alberta. When the petrochemical industry was developed, it relied on the straddle plants to provide the needed feedstock in economic quantities, thus creating added value for Alberta. The producers also benefited from having additional markets for NGL recovery and additional gas markets in the form of shrinkage gas. In summary, the Board believes that the province was well served over the years by the different players in the NGL extraction industry. The Board therefore finds that the rights of producers to extract liquid from the common stream must be balanced against the objectives of preserving the viability of the straddle plant system and maintaining the competitive natural gas market structure that has been developed in Alberta.

Solex submitted that its proposal was in the public interest because it would increase ethane supply, facilitate additional gas resource recovery, and promote competition for NGL extraction. The Board finds that any increase in additional ethane supply would be marginal at best and at a cost that would outweigh the benefits from a provincial perspective. The proposal would significantly reduce the NGL recoverable at the Cochrane plant and would likely increase the per-unit operating cost at this facility. The combination of these factors could result in an adverse impact on the petrochemical industry in a tight ethane market. In such markets, the highest cost ethane supply will set the price. The Board, however, notes that there was no material evidence submitted by any of the parties to identify the extent of such an adverse impact.

In the Board's view, the evidence submitted did not demonstrate that approval of this application would result in developing additional gas resources that otherwise might not have been developed. The Board encourages rationalization and consolidation of underutilized gas plants but does not find that this factor alone supports the approval of Solex's sidestreaming proposal.

With respect to Solex's claim that approval of its application would enhance competition for NGL extraction, the Board believes that the desire to foster competition in NGL extraction has to be balanced with the desire to preserve the viability of the current straddle plant system and must be found to be in the public interest. The Board believes that approval of this application could result in other sidestreaming projects, with a possible significant negative impact on straddle plant costs, provincial NGL recoveries, and consequently on NGL supply costs.

As mentioned previously, the Board believes that the approval of the Solex application would likely necessitate a change in the current convention respecting the contracting for NGL

extraction and may, in fact, require the establishment of an NGTL-wide tracking system for NGL. Approval of the Solex proposal may also impact the working of the NIT mechanism and hence natural gas markets. Given that not all of the industry players that may be affected by these changes were present at the hearing and not all affected parties were contacted by Solex prior to the hearing, the Board believes that it would be inappropriate to approve the application in the absence of direct input from all of the affected parties.

The Board concludes that the applicant failed to demonstrate that an approval of this application would be in the public interest. In the Board's view, the evidence shows that it may have adverse impacts on the straddle plant system and could require a change in the current contracting convention with system-wide implications. There is also insufficient evidence to conclude that the proposed processing scheme would result in greater resource development. Given these findings, the Board is not prepared to approve Solex's application.

The Board appreciates that a number of parties at this hearing expressed a willingness to engage in a future process to consider whether changes are warranted in the current convention for extraction of NGL off the NGTL system and what they might be. The Board is concerned about the inequities, as presented at this hearing, in the current convention and expects this matter to be resolved through an industry process and the Board be advised by October 31, 2004. This industry process should be inclusive of affected parties, providing all constituents with a reasonable opportunity to advance their positions and concerns. The Board recognizes that there are a number of possible venues available to industry to initiate this review, but the Board believes that the preferred option is the collaborative process afforded to all NGTL shippers through the TTP committee. The Board requests that parties work with NGTL to initiate this review by April 1, 2004. If this issue has not been addressed through the TTP or otherwise, the Board may direct NGTL to consider this matter in its next tariff application.

Dated in Calgary, Alberta, on January 27, 2004.

ALBERTA ENERGY AND UTILITIES BOARD

J. R. Nichol, P.Eng.
Presiding Member

F. Rahnama, Ph.D.
Acting Board Member

R. G. Evans, P.Eng.
Acting Board Member

APPENDIX 1 HEARING PARTICIPANTS

Principals and Representatives	Witnesses
Solex Gas Processing Corp. B. K. O'Ferrall, Q.C.	R. Sukovieff, P.Eng. K. Jabusch, P.Eng. J. Vergouwen, P.Eng. J. T. Lynch, P.E., of Ortloff Engineers Ltd. G. Engbloom, P.Eng., of Confer Consulting Ltd.
ATCO Midstream Ltd. S. H. T. Denstedt	
BP Canada Energy Company and BP Canada Energy Resources Company B. J. Roth	B. Rose, P.Eng. S. Castonguay D. Moe, P.Eng. P. Cahill, P.Eng. T. Stauft, of Purvin & Gertz Inc.
Burlington Resources Canada Partnership, Imperial Oil Resources, and ExxonMobil Canada K. F. Miller	
ConocoPhillips Canada N. F. Dilts	
EnCana Corporation D. G. Davies B. Ho	G. Bietz M. Drazen, of Drazen Consulting Group
Foothills Natural Gas J. Macklin	
Nova Chemicals Corporation J. G. Smellie G. M. Nettleton	

(continued)

APPENDIX 1 HEARING PARTICIPANTS (continued)

Principals and Representatives	Witnesses
NOVA Gas Transmission Ltd. P. M. Keys	
Williams Energy (Canada) Inc. L. Keough R. Jacobs	D. Chappell P. Murphy C. Raggett R. Hutchings P. Poos, of Optima Engineers and Constructors Inc.
Alberta Industrial Group (Evidence adopted by Williams)	R. Mansell, Ph.D., of Wright Mansell Research Ltd. R. Schlenker, of Wright Mansell Research Ltd. T. Stauft, of Purvin & Gertz Inc.
Alberta Energy and Utilities Board staff L. Lacasse, Board Counsel G. Habib K. Eastlick, P.Eng. D. Schafer G. McClenaghan, P.Eng.	

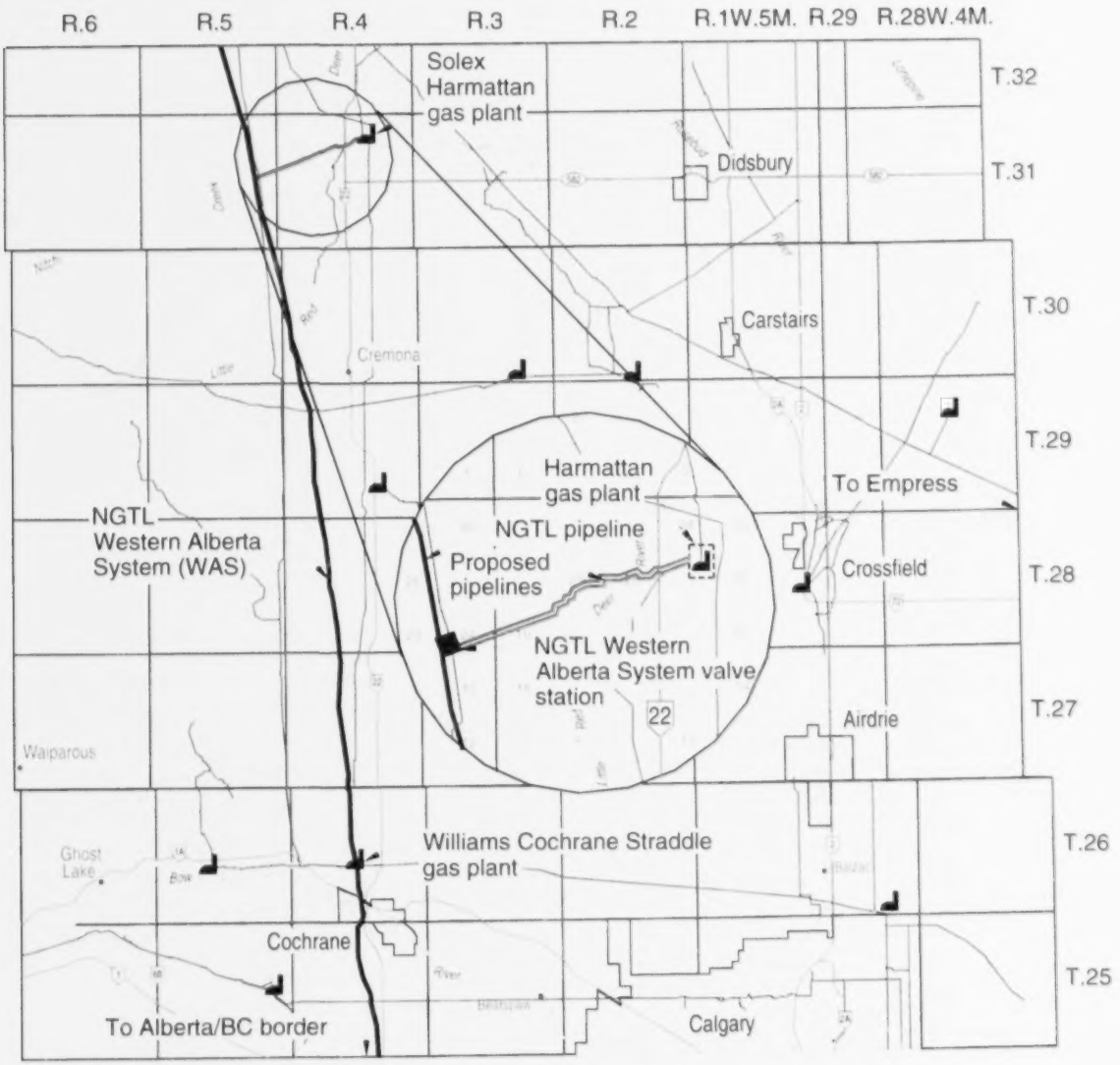

Figure 1. Harmattan plant and proposed pipelines